

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

CIVIL ACTION NO. 05-11240-GAO

HYDRO-PHOTON, INC.
Plaintiff

v.

MERIDIAN DESIGN, INC.
Defendant

MEMORANDUM AND ORDER

January 18, 2007

O'TOOLE, D.J.

The plaintiff, Hydro-Photon, Inc. (“Hydro-Photon”) holds United States Patent No. 6,110,424 (filed Feb. 23, 1999) (“’424 Patent”) entitled “Hand-Held Ultraviolet Water Purification System.” It has sued defendant Meridian Design, Inc. (“Meridian”) claiming that Meridian’s “AquaStar” and “AquaStar Plus!” products, which can be described generically as portable ultraviolet water purifier products, infringe at least claim 7 of the ’424 patent. Meridian has counterclaimed, seeking declarations of non-infringement and invalidity.

Meridian has moved for summary judgment of non-infringement, seeking construction of the “control means” limitation of claim 7 and claiming that, if its proffered construction is adopted, summary judgment of non-infringement is proper because the accused products do not have, and have never had, the liquid-level sensor they claim is part of the required “control means.” Hydro-Photon opposes the motion on the ground that Meridian’s proffered construction of the “control means” as requiring a liquid-level sensor is incorrect. Alternatively, it argues that even if the court were to adopt Meridian’s construction of the “control means” limitation, there

are genuine issues of fact regarding whether the accused products contain or contained a liquid-level sensor, precluding summary judgment. Hydro-Photon has also cross-moved for partial summary judgment of infringement as to claim 7, proffering a proposed construction of the relevant claim terms that it says establishes that Meridian's products literally infringe that claim.

After hearing, I conclude that the proper construction of the "control means" limitation in claim 7 includes both the on-off switch and the liquid-level sensor. I conclude further that there are outstanding factual issues regarding whether Meridian's AquaStar products infringe or have done so in the past. Accordingly, I DENY Meridian's motion for summary judgment for non-infringement (dkt. 15) and DENY Hydro-Photon's cross-motion for partial summary judgment for infringement (dkt. 20).

Summary Judgment Standard

Summary judgment is appropriate "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed. R. Civ. P. 56(c). Claim construction is an issue of law. Wenger Mfg., Inc. v. Coating Mach. Sys., Inc., 239 F.3d 1225, 1231 (Fed. Cir. 2001). "Determination of infringement...is a question of fact." Id.

Construction of the "Control Means" Limitation of Claim 7

As in all infringement cases, the first task is to construe the claim language at issue. See Interactive Gift Express, Inc. v. Compuserve Inc., 256 F.3d 1323, 1330 (Fed. Cir. 2001); Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc., 976 F.2d 1559, 1570 (Fed. Cir. 1992). The claim at issue, independent claim 7, reads as follows:

7. A hand-held system for purifying unsterilized water, the system including:

- A. a drinking container having at one end an opening through which water both enters and exits the container and a second closed end for holding the water in the container;
- B. a case with an outwardly extending ultraviolet light source, the light source for submerging in the unsterilized water that is held in the drinking container and providing ultraviolet emissions that purify the unsterilized water,
- C. control means for turning the light source on and off, the control means being contained inside the case.

'424 Patent col.4 l.26-38.

In this case, the parties agree that the “control means” limitation of claim 7 is a means-plus-function limitation, reciting a “means” for performing a specified “function.”¹ See Wenger Mfg., 239 F.3d at 1232 (stating that use of the word “means” in a claim creates the presumption that 35 U.S.C. § 112, ¶ 6 applies). Thus, to construe claim 7, it is necessary first to identify the relevant function and then to determine what disclosed structure corresponds to the performance of that function. See, e.g., Wenger Mfg., 239 F.3d at 1238; Asyst Tech., Inc. v. Empak, Inc., 268 F.3d 1364, 1369-70 (Fed. Cir. 2001); Kemco Sales, Inc. v. Control Papers Co., Inc., 208 F.3d 1352, 1360-61 (Fed. Cir. 2000). (“After a court establishes that a means-plus-function limitation is at issue, it must then construe the function recited in that claim and determine what structures have been disclosed in the specification that correspond to the means for performing that function.”).

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An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112, ¶ 6 (2000).

The parties agree that the relevant function is “turning the light source on and off,” and I accept that as the stated function. Thus, the question becomes what structure (or structures) is (or are) disclosed that performs that function. See Kemco Sales, 208 F.3d at 1361.

In identifying the corresponding structure, a court must not incorporate structures beyond those necessary to perform the defined function. See Wenger Mfg., 239 F.3d at 1233 (stating that “a court may not import...structural limitations from the written description that are unnecessary to perform the claimed function”); Asyst Tech., 268 F.3d at 1370 (“Structural features that do not actually perform the recited function do not constitute corresponding structure and thus do not serve as claim limitations.”). The corresponding structures comprising the “means” are those that are linked clearly by the specification or prosecution history to the identified function. See Asyst Tech., 268 F.3d at 1370 (citing B. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1424 (Fed. Cir. 1997)).

Meridian contends that the “control means” limitation should be construed to require “the combination of a liquid-level sensor and an on-off switch, as well as the structural equivalents of such a combination.” (Mem. in Supp. of Def. Meridian Design, Inc.’s Mot. for Summ. J. of Non-Infringement 9) [hereinafter Def.’s Mem.]. On the other hand, Hydro-Photon contends that the liquid-level sensor disclosed in the patent specification does not perform the function of “turning the light source on and off.” Hydro-Photon argues that “[t]he only structures disclosed in the specification of the ’424 patent that actually perform the agreed-upon function of turning the light source on and off are the on-off switch 28 and switches that the specification of the ’424 patent indicates connect and disconnect the power source (e.g., the ballast circuitry 13 and battery 14) and the lamp 12.” (Pl. Hydro-Photon, Inc.’s Mem. in Opp’n to Def. Meridian Design, Inc.’s Mot. for Summ. J. of Noninfringement, and in Supp. of Pl.’s

Cross-Mot. for Partial Summ. J. of Infringement 5) [hereinafter Pl.’s Mem.]. Instead of turning on the light source, Hydro-Photon argues that the liquid-level sensor disclosed in the preferred embodiment performs the distinct function of *preventing* the light source from being turned on if water is not sensed. (Pl.’s Mem. 5-6.) Hydro-Photon further relies on the doctrine of claim differentiation, arguing that because the liquid-level sensor is specifically mentioned as a limitation in dependent claim 8, it cannot be read into claim 7 because to do so would render claim 8 superfluous. (Pl.’s Mem. 7-9.)

Here, the function at issue is turning the light source on and off. An electric light source will turn on if and when there is a closed path or circuit permitting the electric current to flow to the light source. The basic purpose of an on-off switch is to open or close the circuit, thereby controlling when the light source will turn on or off. When the switch is in the “off” position, the circuit is open, and the light source will not light; when the switch is in the “on” position, the circuit is closed, and the current will flow through the completed path and the light source will light. Thus, the necessary structures to turn the light source on or off are those that open or close the circuit.

According to the specification, the circuit for the light source current is controlled by two sets of switches.² ’424 Patent col. 3 l.10-12; see also (Pl.’s Mem. 6 (stating “the on-off switch 28 and switches between the power source and lamp 12 perform that [turning the light source on]

² It should be noted that although there are two distinct switches, there is no necessary sequential order in which the switches must be operated. Hydro-Photon characterizes one set of switches as enabling, and the other as performing, the function of turning on the light source. A more appropriate characterization is that there is a two-step process, both steps of which are necessary to perform the function. The on-off switch 28 can be set to the “on” position either before or after the wand is submerged in the water. In either sequence, both the switch and the water level sensor must effectively be “on” before the light will light.

function”).) The first is the on-off switch 28, which both parties agree is a corresponding structure to perform the function and is controlled by the user. ’424 Patent col.3 l.8. The second switch connects the ballast circuitry and the battery to the lamp and is controlled by the liquid-level sensor. Id. at col. 2 l.45-47 (“A liquid-level sensor 20, which is connected to switches (not shown) between the lamp 12, and the ballast circuitry 13 and battery 14”); id. at col. 2 l.57-60 (“When the [liquid-level] sensor determines that it is in water...the sensor closes the switches and allows the lamp to be turned on.”); id. at col.3 l.23-27 (“When the liquid-level sensor 20 determines that the lamp is fully immersed in the water, the sensor closes the switches (not shown) that separate the ballast circuitry 13 and the battery 14 (FIG. 1) from the lamp 12, and the lamp then turns on.”). Both switches need to be closed in order for the circuit to be completed and the light source to light. ’424 Patent col. 3 l.10-12 (“[T]he lamp lights only when both the on-off switch 28 is in the on position and the lamp is fully immersed in water.”). As a result of the fact that the liquid-level sensor controls when the second set of switches are closed, it is evident that the liquid-level sensor performs an integral role in the function of turning the light source on (or off). ’424 Patent col.3 l.9-10 (stating that “the lighting of the lamp is ultimately controlled by the liquid-level sensor”). Although Hydro-Photon attempts to limit the corresponding structure only to the first “on-off” switch, because the liquid-level sensor also controls whether the circuit is close, it too is part of the disclosed structure that performs the identified function.³

³ It is also noteworthy that the specification describes the function performed by the liquid-level sensor in terms of controlling the light source. Compare ’424 Patent col.4 l.37 (the limitation in claim 7 states the “*control* means for turning the light source on and off”) (emphasis added), with ’424 Patent col.3 l.9-10 (the specification states “the lighting of the lamp is ultimately *controlled by* the liquid-level sensor”) (emphasis added).

The canon of claim differentiation does not require a different conclusion. Essentially, the doctrine is a judicially created presumption that the respective scope of two separately stated claims should be sufficiently distinct so as to not render either claim simply redundant or superfluous. See Phillips v. AWH Corp., 415 F.3d 1303, 1315 (Fed. Cir. 2005) (“the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim”); Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 910 (Fed. Cir. 2004) (“As this court has frequently stated, the presence of a dependent claim that adds a particular limitation raises a presumption that the limitation in question is not found in the independent claim.”). Nonetheless, the presumption is not a strict mandate, and it may be overcome if “the circumstances suggest a different explanation, or if the evidence favoring a different claim construction is strong....” Liebel-Flarsheim Co., 358 F.3d at 910. Moreover, the Federal Circuit has reminded us that “[i]t is settled law, however, that independent claims containing means-plus-function limitations do not have the same literal scope as dependent claims reciting specifically the structure that performs the stated function.” Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc., 248 F.3d 1303, 1313 (Fed. Cir. 2001). For claims with means-plus-function limitations, independent claims literally cover “the structure described in the specification *and equivalents* thereof,” whereas dependent claims do not literally cover equivalents. Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1538 (Fed. Cir. 1991); see also Medtronic, Inc., 248 F.3d at 1313. Thus, in this case, independent claim 7 covers the on-off switch and the liquid-level sensor and its equivalents, while the dependent claim 8 only covers the structure literally claimed. The scope of claims 7 and 8 is thus different, albeit only slightly, and the construction of claim 7 adopted here does not contravene the canon of claim differentiation.

Infringement by Meridian's AquaStar Products

Having thus construed claim 7, the next step is to determine whether there is an genuine issue of material fact in dispute concerning whether any of Meridian's AquaStar products infringe Hydro-Photon's '424 Patent.

Hydro-Photon argues that there is at least a factual issue as to whether the "gold pin," "gold water probe," and/or "gold probe" found in some of Meridian's products effectively operates as a liquid-level sensor, so that that aspect of the "control means" of claim 7 of the '424 patent is found in those products. Meridian contends that any such "gold pin," "gold water probe," and/or "gold probe" functions simply as a grounding mechanism, not necessary to the function of turning the light on or off. Discovery on this issue has been limited, and as far as the present motions are concerned exactly what function(s) the "gold pin," "gold water probe," and/or "gold probe" perform in current AquaStar products, or in prior AquaStar products, remains a matter of factual dispute which cannot be resolved on the present motions for summary judgment. See Int'l Rectifier Corp. v. IXYS Corp., 361 F.3d 1363, 1369 (Fed. Cir. 2004) (finding summary judgment appropriate only if the record revealed no trial-worthy issues of fact on the question of infringement).

For the foregoing reasons, I DENY both Meridian's motion for summary judgment of non-infringement and Hydro-Photon's cross motion for partial summary judgment of infringement.

It is SO ORDERED.

January 18, 2007
DATE

/s/ George A. O'Toole, Jr.
DISTRICT JUDGE